

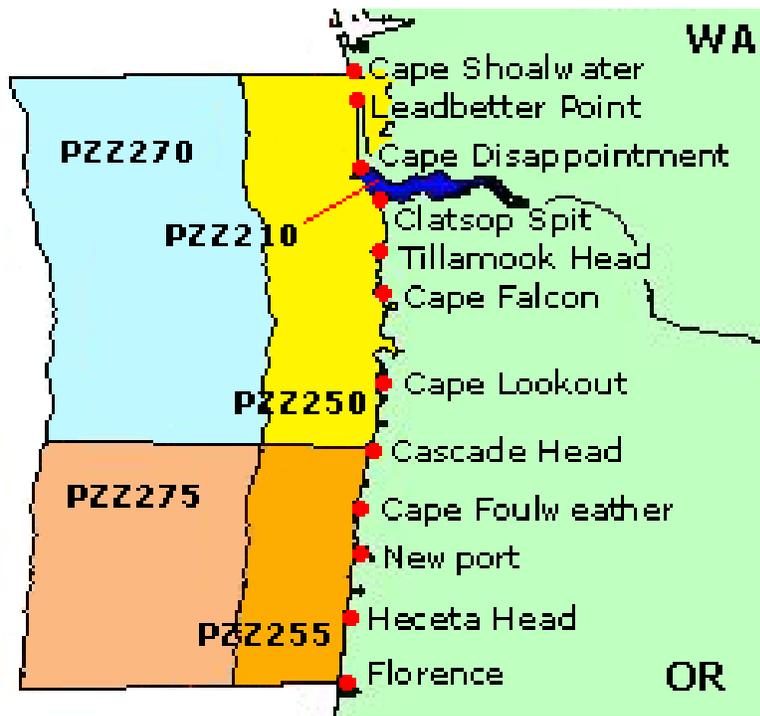
Marine Services

Few people are affected more by weather than the mariner. An unexpected change in winds, seas, or visibility can reduce the efficiency of marine operations and threaten the safety of a vessel and its crew. It is the role of the National Weather Service to provide marine warnings and forecasts for governmental, recreational, and commercial maritime operations on the high seas and along the coasts of the United States. The National Weather Service is also responsible for the collection and transmission of marine data.

An array of buoys, maintained by several government agencies, and ship observations help forecasters with crucial wind and pressure information. The buoys and ships also provide valuable information about wave characteristics.

WFO Portland is responsible for all marine forecasts and warnings for the southwest Washington coast and northwest Oregon coast from Cape Shoalwater, WA to Florence, OR out to 60 nautical miles (nm). WFO Portland is also responsible for forecasts and warnings for the Columbia River Bar.

Marine Zone Forecast Map



Definition of Forecast Areas:

PZZ210: Columbia River Bar

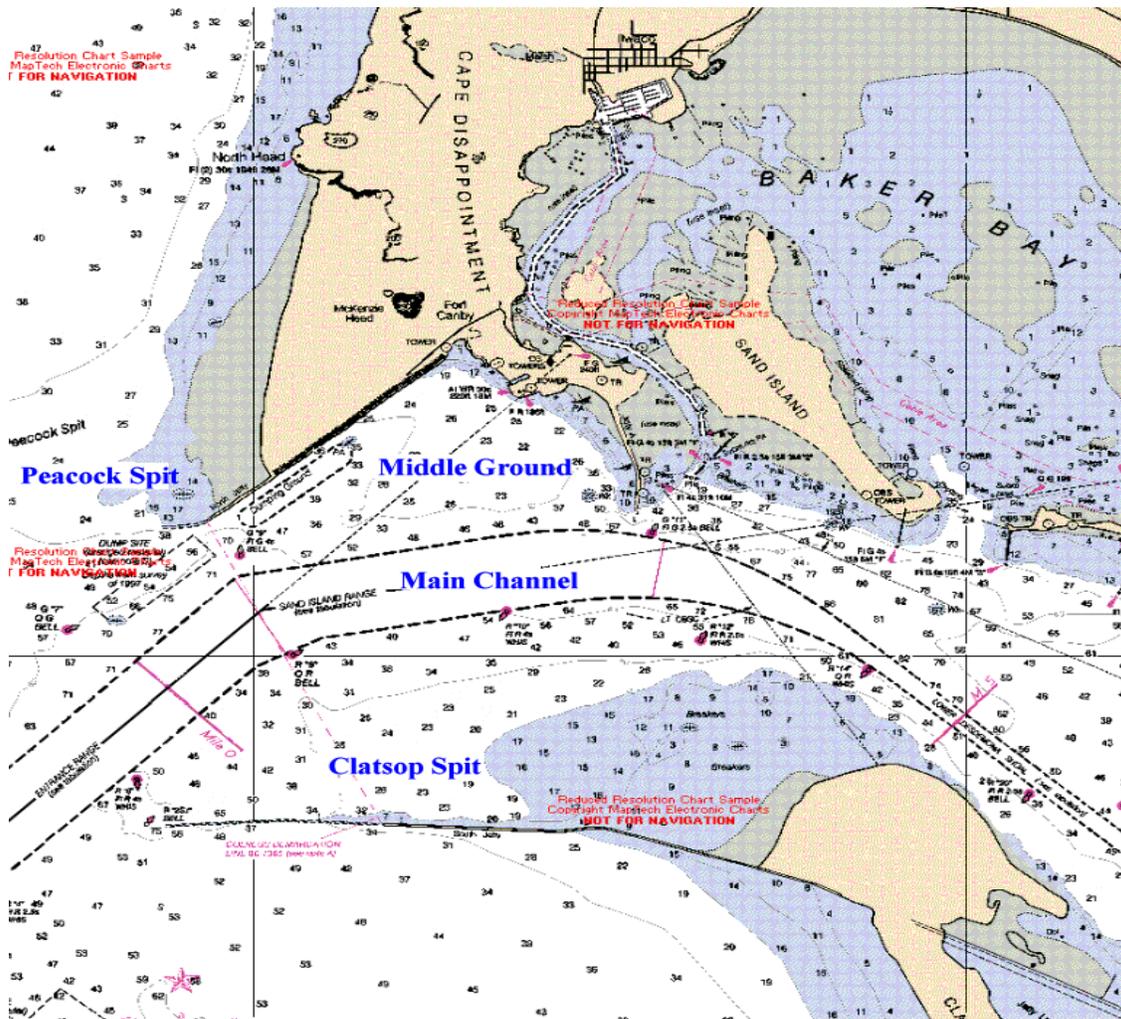
PZZ250: Coastal Waters from Cascade Head, OR to Cape Shoalwater, WA and westward 20nm

PZZ255: Coastal Waters from Florence, OR to Cascade Head, OR and westward 20nm

PZZ270: Offshore Waters from Cascade Head, OR to Cape Shoalwater, WA and westward 20 to 60nm

PZZ275: Offshore Waters from Florence, OR to Cascade Head, OR and westward 20 to 60nm

Columbia River Bar



Routine Marine Products

FZUS56 KPQR 281548
CWFPQR

COASTAL WATERS FORECAST
NATIONAL WEATHER SERVICE PORTLAND OREGON
900 AM PDT FRI OCT 28 2005

COASTAL WATERS FROM CAPE SHOALWATER WASHINGTON TO FLORENCE
OREGON
AND WESTWARD 60 NM

PZZ200-282230-
900 AM PDT FRI OCT 28 2005

.SYNOPSIS FOR SOUTHERN WASHINGTON AND NORTHERN OREGON COAST...
DEEP LOW PRES WILL REMAIN OVER THE GULF OF ALASKA INTO
SAT...WHILE HIGH PRES OFF CALIFORNIA BUILDS N ACROSS THE WATERS
TODAY AND TONIGHT. LARGE SWELL ARE EXPECTED TO ARRIVE LATER
TODAY. A WEAKER PAC FRONT IS EXPECTED SAT NIGHT...AND ANOTHER
SUN NIGHT INTO MON.

\$\$

PZZ250-255-270-275-282230-
/O.CON.KPQR.SC.Y.0099.000000T0000Z-051030T1200Z/
COASTAL WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT
20 NM-COASTAL WATERS FROM CASCADE HEAD TO FLORENCE OR OUT 20 NM-
WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT 20 TO
60 NM-WATERS FROM CASCADE HEAD TO FLORENCE OR FROM 20 TO 60 NM-
848 AM PDT FRI OCT 28 2005

...SMALL CRAFT ADVISORY REMAINS IN EFFECT THROUGH LATE SATURDAY
NIGHT...

.TODAY...SW WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 11 FT AT
11 SECONDS...BUILDING TO 16 FT AT 12 SECONDS IN THE AFTERNOON.
SHOWERS
LIKELY.

.TONIGHT...SW WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 19 FT
AT 12 SECONDS. CHANCE OF SHOWERS.

.SAT...SW WIND 15 KT...EASING TO 10 KT IN THE AFTERNOON. WIND
WAVES 2 FT. W SWELL 15 FT AT 12 SECONDS. CHANCE OF SHOWERS.

.SAT NIGHT...S WIND 10 TO 15 KT. WIND WAVES 3 FT. W SWELL
11 FT. CHANCE OF SHOWERS IN THE EVENING...THEN CHANCE OF RAIN
AFTER MIDNIGHT.

.SUN...S WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 9 FT. RAIN
LIKELY.

.SUN NIGHT...S WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 7 FT.
RAIN.

.MON...SW WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 9 FT.
.TUE...N WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 10 FT.

\$\$

PZZ210-282230-
/O.CON.KPQR.RB.Y.0038.000000T0000Z-051029T0300Z/
COLUMBIA RIVER BAR-
900 AM PDT FRI OCT 28 2005

...SMALL CRAFT ADVISORY FOR ROUGH BAR REMAINS IN EFFECT UNTIL
8 PM PDT THIS EVENING...

IN THE MAIN CHANNEL...COMBINED SEAS 11 FT THIS
MORNING...BUILDING
TO 14 FT THIS AFTERNOON...AND TO 16 FT BY THIS EVENING.
HOWEVER...SEAS TEMPORARILY BUILDING TO 17 FT DURING THE EBB
CURRENT AROUND 245 PM THIS AFTERNOON...AND TO 18 FT DURING THE
EBB
AROUND 3 AM SAT MORNING. BREAKERS WILL COVER THE BAR DURING THE
EBBS.

\$\$

Coastal Waters Forecast (CWF, FZUS56)

The Coastal Waters Forecast is issued four times daily (3:00 am/pm and 9:00 am/pm PDT/PST). It is a general forecast for the coastal waters of southern Washington and north and central Oregon.

Forecasts of wind speed and direction, swell height and swell direction, and the swell period are included, as well as any significant weather. A brief weather synopsis summarizes the weather patterns affecting the area.

Warnings and advisories for the coastal waters are headlined in the Coastal Waters Forecast.

Routine Marine Products

FZUS56 PQR 281548
CWFPQR

COASTAL WATERS FORECAST
NATIONAL WEATHER SERVICE PORTLAND OREGON
848 AM PDT FRI OCT 28 2005

COASTAL WATERS FROM CAPE SHOALWATER WASHINGTON TO FLORENCE
OREGON
AND WESTWARD 60 NM

PZZ200-282230-
848 AM PDT FRI OCT 28 2005

.SYNOPSIS FOR SOUTHERN WASHINGTON AND NORTHERN OREGON COAST...
DEEP LOW PRES WILL REMAIN OVER THE GULF OF ALASKA INTO
SAT...WHILE HIGH PRES OFF CALIFORNIA BUILDS N ACROSS THE WATERS
TODAY AND TONIGHT. LARGE SWELL ARE EXPECTED TO ARRIVE LATER
TODAY. A WEAKER PAC FRONT IS EXPECTED SAT NIGHT...AND ANOTHER
SUN NIGHT INTO MON.

\$\$

PZZ250-255-270-275-282230-
/O.CON.KPQR.SC.Y.0099.000000T0000Z-051030T1200Z/
COASTAL WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT
20 NM-COASTAL WATERS FROM CASCADE HEAD TO FLORENCE OR OUT 20
NM-
WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT 20 TO
60 NM-WATERS FROM CASCADE HEAD TO FLORENCE OR FROM 20 TO 60 NM-
848 AM PDT FRI OCT 28 2005

...SMALL CRAFT ADVISORY REMAINS IN EFFECT THROUGH LATE SATURDAY
NIGHT...

.TODAY...SW WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 11 FT AT
11 SECONDS...BUILDING TO 16 FT AT 12 SECONDS IN THE AFTERNOON.
SHOWERS
LIKELY.

.TONIGHT...SW WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 19 FT
AT 12 SECONDS. CHANCE OF SHOWERS.

.SAT...SW WIND 15 KT...EASING TO 10 KT IN THE AFTERNOON. WIND
WAVES 2 FT. W SWELL 15 FT AT 12 SECONDS. CHANCE OF SHOWERS.

.SAT NIGHT...S WIND 10 TO 15 KT. WIND WAVES 3 FT. W SWELL
11 FT. CHANCE OF SHOWERS IN THE EVENING...THEN CHANCE OF RAIN
AFTER MIDNIGHT.

.SUN...S WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 9 FT. RAIN
LIKELY.

.SUN NIGHT...S WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 7 FT.
RAIN.

.MON...SW WIND 20 TO 25 KT. WIND WAVES 5 FT. W SWELL 9 FT.

.TUE...N WIND 10 TO 15 KT. WIND WAVES 2 FT. W SWELL 10 FT.

\$\$

PZZ210-282230-
/O.CON.KPQR.RB.Y.0038.000000T0000Z-051029T0300Z/
COLUMBIA RIVER BAR-
848 AM PDT FRI OCT 28 2005

...SMALL CRAFT ADVISORY FOR ROUGH BAR REMAINS IN EFFECT UNTIL
8 PM PDT THIS EVENING...

IN THE MAIN CHANNEL...COMBINED SEAS 11 FT THIS
MORNING...BUILDING TO 14 FT THIS AFTERNOON...AND TO 16 FT BY
THIS EVENING. HOWEVER...SEAS TEMPORARILY BUILDING TO 17 FT
DURING THE EBB CURRENT AROUND 245 PM THIS AFTERNOON...AND TO 18
FT DURING THE EBB AROUND 3 AM SAT MORNING. BREAKERS WILL COVER
THE BAR DURING THE EBBS.

\$\$

Bar Forecast

(Contained within CWF, FZUS56)

The Coastal Waters Forecast also includes the Columbia River Bar Forecast. The Bar Forecast is necessitated by the high volume of ships and other vessels crossing the Columbia River Bar. Bar conditions are affected by a combination of currents and ocean waves reaching the Oregon and Washington coasts.

Harbor entrances can be extremely hazardous, especially when heavy seas meet an opposing ebb current. The Coast Guard has the authority to close the bar at any time. Vessels can become stranded outside the bar when conditions deteriorate, particularly during the summer when many small and marginally un-seaworthy vessels transit the bar. The bar forecasts are updated for significant changes in conditions.

Significant Wave Height:

Significant Wave Height is given as a range of values expected between maximum ebb and maximum flood conditions. A trend is expressed if waves build or subside during the forecast period.

Times of Maximum Ebb Currents:

The times when the two maximum ebb currents will occur within the next 24 hours are given with each forecast.

Breakers:

If breakers are unlikely, this remark is excluded. The forecast refers to breakers occurring on the significant larger waves on the bar, and does not address breaking wind waves.

Routine Marine Products

FZPN25 KWBC 232208
OFFPZ5

OFFSHORE WATERS FORECAST
NATIONAL WEATHER SERVICE WASHINGTON DC
OCEAN PREDICTION CENTER/OCEAN FORECAST BRANCH
330 PM PDT MON 23 AUG 2004

WASHINGTON AND OREGON WATERS FROM 60 NM TO 250 NM OFFSHORE.

PZZ080-240530-
.SYNOPSIS...WEAK LOW PRES OVER THE E WASHINGTON WATERS WITH A COLD FRONT WILL MOVE E AND INLAND BY EARLY TONIGHT. A WEAK HIGH PRES RIDGE WILL MOVE E INTO THE WATERS LATER TONIGHT AND EARLY TUE. ANOTHER COLD FRONT WILL ENTER THE W PORTION LATE TUE AND MOVE SE ACROSS THE WATERS TUE NIGHT. HIGH PRES WILL BUILD IN FROM THE W WED AND DEVELOP A RIDGE ACROSS THE OREGON WATERS THU INTO FRI...AND REMAIN THROUGH SAT.
\$\$

PZZ081-240530-
CAPE FLATTERY TO CAPE LOOKOUT
330 PM PDT MON 23 AUG 2004

.TONIGHT...W TO NW WINDS 15 TO 20 KT BECOMING W TO SW 10 TO 20 KT. SEAS 5 TO 10 FT BECOMING 5 TO 7 FT...HIGHEST SW. SCATTERED SHOWERS.
.TUE...W TO SW WINDS INCREASING TO 15 TO 25 KT. SEAS BUILDING TO 7 TO 12 FT... HIGHEST W. SCATTERED SHOWERS.
.TUE NIGHT...W TO SW WINDS 15 TO 25 KT BECOMING W 20 TO 30 KT. SEAS BUILDING TO 10 TO 14 FT. HIGHEST WINDS AND SEAS W. SCATTERED SHOWERS.
.WED...W TO NW WINDS 15 TO 25 KT...EXCEPT TO 30 KT OVER SW PORTION. SEAS BUILDING TO 10 TO 16 FT. HIGHEST WINDS AND SEAS W.
.WED NIGHT...N TO NW WINDS 15 TO 25 KT. SEAS 10 TO 14 FT.
.THU...W WINDS 15 TO 20 KT. SEAS SUBSIDING TO 8 TO 11 FT.
.FRI...W TO SW WINDS 10 TO 20 KT. SEAS 7 TO 10 FT.
.SAT...W WINDS 10 TO 20 KT. SEAS 7 TO 9 FT.
\$\$

PZZ082-240530-
CAPE LOOKOUT TO POINT ST GEORGE
330 PM PDT MON 23 AUG 2004

.TONIGHT...W TO NW WINDS 15 TO 20 KT DECREASING TO 10 TO 15 KT. SEAS 6 TO 10 FT SUBSIDING TO 6 TO 8 FT. SCATTERED SHOWERS.
.TUE...W TO SW WINDS INCREASING TO 15 TO 25 KT. SEAS 6 TO 9 FT. HIGHEST WINDS AND SEAS N. SCATTERED SHOWERS.
.TUE NIGHT...W TO SW WINDS 15 TO 25 KT EARLY BECOMING W TO NW. SEAS BUILDING TO 8 TO 12 FT. HIGHEST WINDS AND SEAS NW. SCATTERED SHOWERS.
.WED...W TO NW WINDS 15 TO 25 KT. SEAS 9 TO 14 FT. HIGHEST WINDS AND SEAS NW.
.WED NIGHT...N TO NW WINDS 15 TO 20 KT. SEAS SUBSIDING TO 8 TO 12 FT.
.THU...NW WINDS INCREASING TO 15 TO 20 KT...HIGHEST SE. SEAS 8 TO 12 FT.
.FRI...N TO NW WINDS 10 TO 20 KT...EXCEPT TO 25 KT SE PORTION. SEAS 8 TO 11 FT.
.SAT...N WINDS 15 TO 25 KT...EXCEPT TO 30 KT OVER SE PORTION. SEAS 6 TO 11 FT. HIGHEST WINDS AND SEAS SE.
\$\$

Offshore Waters Forecast (OFFPZ5, FZPN25)

The Offshore Forecast is issued four times daily (2:30 am/pm and 8:30 am/pm PST and 3:30 am/pm and 9:30 am/pm PDT) for the Oregon and Washington offshore waters from 60 to 250 nautical miles offshore. The Offshore Forecast is issued by the Ocean Prediction Center located in Washington, D.C.

Weather Synopsis:

The weather synopsis summarizes weather patterns affecting a large area. It can include information on features farther "upstream" that may affect the offshore waters.

Forecast Section:

This section contains a forecast for the next five days. The forecast consists of wind, combined seas, and any significant weather, such as thunderstorms or any weather that restricts visibility or impedes deck activity.

Non-Routine Marine Products

The greatest weather threat to mariners is wind. Wind affects mariners directly and indirectly as it generates wind waves and swell. Most marine warning thresholds are defined by wind speed. The National Weather Service Portland uses the following criteria for warnings:

Warning or Advisory	Conditions Required for Issuance	Comments
Small Craft Advisory	<ul style="list-style-type: none"> ▫ Sustained wind speed and/or frequent gusts of 21-33 kts, inclusive ▫ Hazardous Seas (10+ ft) ▫ Rough Columbia River Bar. 	Conditions will occur within 12 hours, <i>OR</i> high confidence that they will occur within 24 hours.
Gale Warning	Sustained wind speed and or frequent gusts of 34-47 kts, inclusive	Conditions will occur within 24 hours, <i>OR</i> high confidence that they will occur within 36 hours.
Storm Warning	Sustained wind speed and/or frequent gusts of 48-63 kts, inclusive	Conditions will occur within 24 hours, <i>OR</i> high confidence that they will occur within 36 hours.
Hurricane Force Wind Warning	Sustained wind speed and/or frequent gusts of greater than 63 kts	Conditions will occur within 24 hours, <i>OR</i> high confidence that they will occur within 36 hours.
Special Marine Warning	Sustained wind or frequent gusts greater than or equal to 34 kts; hail $\frac{3}{4}$ inch or greater, or waterspout .	Issued for conditions lasting 2 hours or less.
High Surf Advisory & High Surf Warning	High surf is caused by large waves breaking on or near the shore (<i>See the accompanying "Total Wave Energy Flux per Unit Shoreline" for a chart of the criteria</i>).	These waves have sufficient energy to erode beaches, move large logs, and wash over jetties or exposed rocks.
Tidal Overflow Advisory	Flooding of low-lying areas due to unusually high water near the time of high tides, but not occurring in combination with damaging waves.	
Coastal Flood Warning	A combination of very high surf and high water, with waves traveling beyond the beach, producing damaging results.	The extent of coastal flooding ranges from minor tidal overflow in coastal streams to extensive inundation and beach erosion associated with major storms.

Non-Routine Marine Products

WHUS46 KPQR 070036
CFWPQR

BULLETIN - IMMEDIATE BROADCAST REQUESTED
COASTAL FLOOD WARNING
NATIONAL WEATHER SERVICE PORTLAND OR
435 PM PST THU NOV 7 2005

ORZ001-002-WAZ021-PZZ250-255-081215-
/O.NEW.KPQR.CF.W.0002.051107T2335Z-051108T2300Z/
NORTH OREGON COAST-CENTRAL OREGON COAST-SOUTH WASHINGTON COAST-
435 PM PST THU NOV 7 2005

...A COASTAL FLOOD WARNING IS IN EFFECT FROM 430 PM TODAY TO 300 PM
FRI FOR THE CENTRAL OREGON COAST...NORTH OREGON COAST AND SOUTH
WASHINGTON COAST...

A COASTAL FLOOD WARNING IS NOW IN EFFECT FOR THE CENTRAL OREGON
COAST...NORTH OREGON COAST AND SOUTH WASHINGTON COAST. LARGE OCEAN
SWELL OF 35 TO 40 FEET AT BUOYS 300 MILES OFF THE OREGON AND
SOUTHERN WASHINGTON COAST WILL REACH THE NORTHERN AND CENTRAL OREGON
COASTS AND THE SOUTH WASHINGTON COASTS AROUND MIDNIGHT TONIGHT.
SWELL HEIGHTS ALONG THE COAST WHEN THESE LARGE SWELL REACH THE COAST
WILL RANGE FROM 30 TO 35 FEET...WITH THE LARGEST SWELLS ON THE
CENTRAL OREGON COAST.

THE GREATEST RISK WILL BE NEAR HIGH TIDE TONIGHT...WHICH WILL OCCUR
BETWEEN 3 AND 4 AM EARLY FRIDAY MORNING. THE MAIN IMPACTS EXPECTED
ARE THE LIKELY FLOODING OF BEACHES...LOW LYING ROADS SUCH AS ALONG
HIGHWAY 101 NEAR LINCOLN CITY...AND ANY OTHER LOW LYING EXPOSED
AREAS. BEACH EROSION WILL OCCUR.

EXERCISE EXTREME CAUTION ALONG BEACHES AND IN OTHER LOW LYING AREAS.
UNPREDICTABLE AND DESTRUCTIVE WAVES MAY WASH OVER BEACHES...JETTIES
AND OTHER STRUCTURES WITH NO WARNING.

LARGE DEBRIS AND LOGS WILL BE TOSSED ONSHORE IN THE SURF ZONE BY
THE LARGE WAVES. THIS DEBRIS CAN AND HAS REPEATEDLY IN THE PAST
TRAPPED AND CAUSED THE DROWNING OF PEOPLE IN THE SURF ZONE.
\$\$

Coastal Flood Products (CFW, WHUS46)

All coastal flood products (watches, warnings, and statements) are issued with the CFW (WHUS46) identifier.

Coastal Flood Watch CFW, WHUS46)

The Coastal Flood Watch informs the public and cooperating agencies that coastal flooding is possible within 12 to 36 hours of the issuance time.

Coastal Flood Warning CFW, WHUS46)

The Coastal Flood Warning is used when coastal flooding, which may pose a serious threat to life and property, is occurring, or is expected within 12 to 24 hours.

WHUS46 KPQR 231330
CFWPQR

COASTAL HAZARDS MESSAGE
NATIONAL WEATHER SERVICE PORTLAND OR
530 AM PST TUE NOV 23 2005

WAZ021-240000-
/O.NEW.KPQR.CF.Y.0002.051023T1230Z-051024T0000Z/
SOUTH WASHINGTON COAST-
530 AM PST TUE NOV 23 2005

...TIDAL OVERFLOW ADVISORY IN EFFECT TODAY ALONG LOW LYING SECTIONS
OF THE SOUTHWEST WASHINGTON COAST...

A SIGNIFICANT TIDAL OVERFLOW IS EXPECTED AROUND HIGH TIDE LATER
THIS MORNING ALONG LOW-LYING PARTS OF THE SOUTHWEST WASHINGTON
COAST. HIGH WATER WILL DEVELOP LATER THIS MORNING ALONG WILLAPA BAY
AND ESTUARIES FROM MEGLER TO NORTH COVE AS THE TIDE COMES IN.

TODAYS HIGH TIDE AT TOKE POINT IS PREDICTED TO REACH 10.0 FEET AT
1130 AM. ADDITIONALLY...THE TIDAL ANOMALY IS RUNNING NEAR 3 FEET
THIS MORNING...WHICH WILL MAKE THE OBSERVED TIDE NEAR 13.0 FEET
LATER THIS MORNING. THIS IS ONE OF THE HIGHEST TIDES OF THE SEASON.
YESTERDAY=S HIGHEST TIDE WAS 9.7 FEET. THE NEXT LOW TIDE WILL OCCUR
AT 706 PM THIS EVENING.

AFFECTED LOCATIONS WILL INCLUDE LOW LYING AREAS NEAR BAYS AND
SLOUGHS...HIGHWAY 101...AND THE LOWER REACHES OF COASTAL RIVERS.
WITH A TIDE OF 13.0 FEET...THE FOLLOWING AREAS HAVE HISTORICALLY
BEEN SUBJECT TO FLOODING. LOW LYING AREAS IN THE CITY OF
RAYMOND...HIGHWAY 101 NEAR RAYMOND ...POTTER SLOUGH
...NEMAH...MCGOWAN TO MEGLER...AND THE PORT OF ILLWACO.

TIDES AND RIVER LEVELS WILL BE LOWER DURING SUBSEQUENT HIGH TIDES.
CONSULT LOCAL TIDE TABLES FOR TIMES AND HEIGHTS OF TIDES IN YOUR
AREA.

\$\$

Coastal Flood Statement CFW, WHUS46)

The Coastal Flood Statement provides the public and cooperating agencies information on the status of existing coastal flood watches and/or warnings. It also provides the latest information on local conditions, an overview of the threat for the entire coastline, and current tidal information. This statement is also used to cancel a coastal flood watch or warning, or delete part of a watch or warning that refers to areas no longer threatened by coastal flooding.

Tidal Overflow Advisories

Tidal Overflow Advisories are also issued under the Coastal Flood Product.

Non-Routine Marine Products

```

WHUS46 KPQR 282043
CFWPQR

COASTAL HAZARD MESSAGE
NATIONAL WEATHER SERVICE PORTLAND OR
143 PM PDT FRI OCT 28 2005

ORZ001-002-WAZ021-290445-
/O.NEW.KPQR.SU.Y.0002.051028T2043Z-051029T0500Z/
NORTH OREGON COAST-CENTRAL OREGON COAST-SOUTH WASHINGTON COAST-
143 PM PDT FRI OCT 28 2005

...HIGH SURF ADVISORY IN EFFECT UNTIL 10 PM PDT THIS EVENING...

THE NATIONAL WEATHER SERVICE IN PORTLAND HAS ISSUED A HIGH SURF
ADVISORY...WHICH IS IN EFFECT UNTIL 10 PM PDT THIS EVENING.

LARGE SWELL FROM A PACIFIC LOW PRESSURE SYSTEM HAS ARRIVED ALONG
THE COAST THIS AFTERNOON. SEAS WILL BUILD TO 20 TO 22 FEET THROUGH
THIS AFTERNOON AND EARLY EVENING BEFORE SUBSIDING TO 14 TO 16 FEET
AFTER 10 PM.

A HIGH SURF ADVISORY MEANS THAT HIGH SURF WILL AFFECT BEACHES IN
THE ADVISORY AREA...PRODUCING RIP CURRENTS AND LOCALIZED BEACH
EROSION.

**
    
```

High Surf Advisory & Warning (CFW, WHUS46)

The High Surf Advisory and High Surf Warning are also issued under a Coastal Flood Statement identifier. The high surf advisory or warning is issued when high surf is expected within the next 12 to 36 hours. The threshold criteria are based on wave height and period expressed as wave energy flux.

A high surf advisory is issued when the total wave energy flux is equal to or greater than 100×10^4 J/ms (a table for total wave energy flux follows).

A high surf warning is issued when the total wave energy flux is equal to or greater than 160×10^4 J/ms (a table for total wave energy flux follows).

Total Wave Energy Flux per unit Shoreline
 Given wave height and period and assuming 0° angle of incidence ($\times 10^4$ J/ms)

	10 s	11 s	12 s	13 s	14 s	15 s	16 s	17 s	18 s	19 s	20 s
17 ft	51	56	61	66	71	77	82	87	92	97	102
18 ft	57	63	69	74	80	86	92	97	103	109	114
19 ft	64	70	77	83	89	96	102	108	115	121	128
20 ft	71	78	85	92	99	106	113	120	127	134	141
21 ft	78	86	93	101	109	117	125	132	140	148	156
22 ft	86	94	103	111	120	128	137	145	154	162	171
23 ft	93	103	112	121	131	140	150	159	168	178	187
24 ft	102	112	122	132	142	153	163	173	183	193	204
25 ft	110	121	132	144	155	166	177	188	199	210	221
27 ft	129	142	155	167	180	193	206	219	232	245	258
28 ft	138	152	166	180	194	208					
29 ft	149	163	178	193	208	223					
30 ft	159	175	191	207	223	238					

Shaded areas ($\sim 100 \times 10^4$ J/ms and $\sim 160 \times 10^4$ J/ms) are considered the threshold values that prompt issuance of a high surf advisory and high surf warning, respectively.

Non-Routine Marine Products

WHUS56 KPQR 022230
SMWFPQR
PZZ250-022300-
/O.NEW.KPQR.MA.W.0001.050402T2230Z-050402T2300Z/

BULLETIN - IMMEDIATE BROADCAST REQUESTED
SPECIAL MARINE WARNING
NATION PST WED APR 2 2005
AL WEATHER SERVICE PORTLAND OR
221 PM
THE NATIONAL WEATHER SERVICE IN PORTLAND HAS ISSUED A

* SPECIAL MARINE WARNING FOR...
COASTAL WATERS CASCADE HEAD, OR TO CAPE SHOALWATER, WA WESTWARD 20
NM

* UNTIL 300 PM PST

* AT 221 PM PST...EMERGENCY MANAGEMENT OFFICIALS REPORTED A
WATERSPOUT PRODUCING THUNDERSTORM ABOUT 2 MILES WEST OF
NESKOWIN... MOVING NORTHEAST AT 15 MPH.

* THE WATERSPOUT PRODUCING THUNDERSTORM THREAT WILL BE GREATEST
THROUGH 300 PM PST IN THE WATERS NEAR...
SOUTHEASTERN COASTAL WATERS CASCADE HEAD, OR TO CAPE SHOALWATER,
WA WESTWARD 20 NM

SEEK SAFE HARBOR IF A WATERSPOUT IS SPOTTED. ASSOCIATED THUNDERSTORMS
COULD PRODUCE WIND GUSTS OVER 35 KNOTS...HIGHER WAVES...HEAVY RAIN...
SMALL HAIL...AND DANGEROUS LIGHTNING STRIKES.

LAT...LON 4517 12414 4503 12398 4527 12349 4547 12371

\$\$

Special Marine Warning (SMW, WHUS56)

A Special Marine Warning is issued for short duration events of up to 2 hours, with sustained winds or frequent gusts of 34 knots or greater. The conditions covered by the Marine Warning are not adequately covered by existing marine warnings and forecasts. Examples would include thunderstorms, squalls, wind shift lines, and cold air funnels not expected to affect land areas.

FZUS76 KPQR 210313
MWSPQR

MARINE WEATHER STATEMENT
NATIONAL WEATHER SERVICE PORTLAND OR
811 PM PDT FRI MAY 20 2005

PZZ210-250-210321-
/O.CAN.KPQR.MA.W.0001.000000T0000Z-050521T0330Z/
COLUMBIA RIVER BAR-
COASTAL WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT 20
NM-
811 PM PDT FRI MAY 20 2005

...SPECIAL MARINE WARNING CANCELLED...

THE AFFECTED AREAS WERE...
COASTAL WATERS FROM CAPE SHOALWATER WA TO CASCADE HEAD OR OUT 20 NM
COLUMBIA RIVER BAR

AT 811 PM PDT NATIONAL WEATHER SERVICE DOPPLER RADAR INDICATED THAT
THE WATERSPOUT THAT PROMPTED THE WARNING HAD MOVED ONSHORE...THUS
THE WARNING HAS BEEN CANCELLED.

THIS THUNDERSTORM IS STILL OVER THE SOUTHERN PART OF THE WILLIPA
BAY BUT IS NOT EXPECTED TO FORM ANY NEW WATERSPOUTS.

LAT...LON 4641 12417 4624 12407 4629 12395 4663 12398

\$\$

Marine Weather Statement (MWS, FZUS76)

A Marine Weather Statement is issued to provide follow-up information on Special Marine Warnings and to cancel all or part of the warning. The Marine Weather Statement may also describe short duration, non-severe, but potentially hazardous conditions in which sustained winds or frequent gusts to 33 knots occur for a period of two hours or less.